

3.3 Guided Notes

Objectives

- **Explain** how elevation and topography are shown on a map.
- **Describe** three types of information shown in geologic maps.
- **Identify** two uses of soil maps.

Topographic Maps

- One of the most widely used maps is called a topographic map, which shows the _____ features of Earth.
- **topography** the _____ and _____ of the land surface features of a region
- **elevation** the height of an object above _____

Advantages of Topographic Maps

- Topographic maps provide more detailed information about the _____ of Earth.

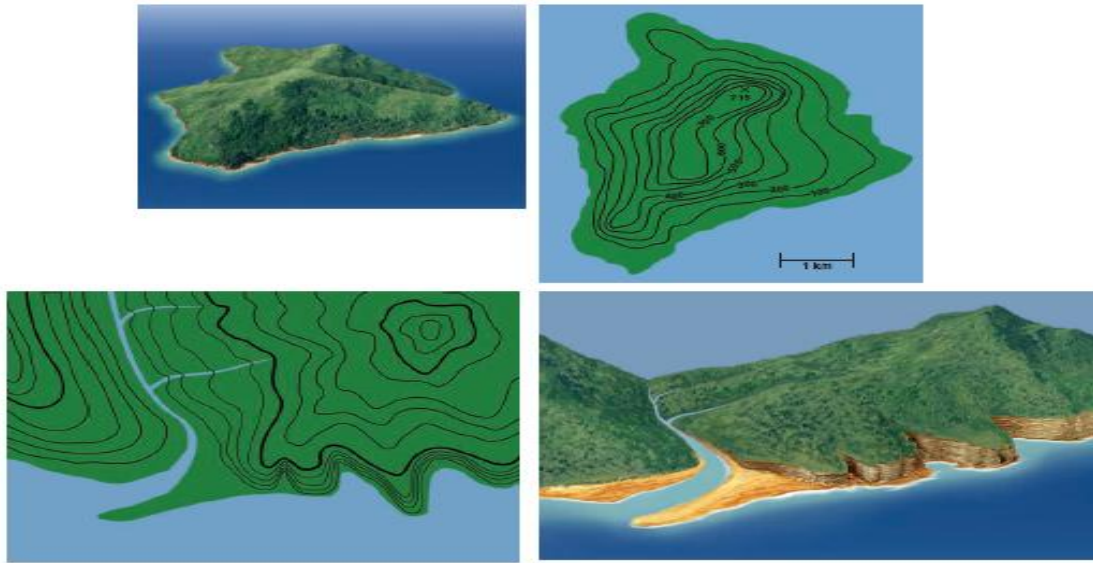
Elevation on Topographic Maps

- On topographic maps, elevation is shown by using _____ lines.
- **contour line** a line that connects points of _____ elevation on a map
- The difference in elevation between one contour line and the next is called the *contour* _____. The contour interval is selected based on the relief of the area being mapped.
- **relief** the difference between the highest and lowest elevations in a given area
- Every _____ contour line is darker than the four lines one either side of it. This _____ *contour* makes reading elevation easier.

Landforms on Topographic Maps

- The _____ and _____ of contour lines indicate the shapes of the landforms represented on a topographic map.
- Closely spaced contour lines indicate that the slope is _____.
- Widely spaced contour lines indicate that the land is relatively _____.
- A contour line that bends to form a V shape indicates a _____. The bend in the V points toward the _____ end of the valley; this V points _____, or in the direction from which the water flows, if there is a stream.
- Contour lines that form closed loops indicate a _____ or a _____. Closed loops that have short straight lines perpendicular to the inside of the loop indicate a _____.

The diagram below shows how topographic maps represent landforms.



Topographic Map Symbols

- Symbols are used to show certain features on topographic maps.
- Symbol color indicates the type of feature. Constructed features, such as buildings, are shown in _____. Highways are shown in _____. Bodies of water are colored _____, and forested areas are colored _____.
- Contour lines are _____ or black.

Geologic Maps

- Geologic maps are designed to show the distribution of _____ features, such as the types of rocks found in a given area and the locations of faults, folds, and other structures.

Rock Units on Geologic Maps

- On geologic maps, geologic units are distinguished by _____. Units of similar ages are generally assigned colors in the same color family, such as different shades of blue.
- In addition to assigning a color, geologists assign a set of _____ to each rock unit. This set of letters symbolizes the _____ of the rock and the name of the unit or the type of rock.

Other Structures on Geologic Maps

- Other markings on geologic maps are _____ lines. A *contact line* indicates places at which two geologic units meet, called *contacts*.
- The two main types of contacts are _____ and _____ contacts.
- Geologic maps also indicate the strike and slip of _____. *Strike* indicates the _____ in which the beds run, and *dip* indicates the _____ at which the beds tilt.

Soil Maps

- Scientists construct soil maps to _____, _____, and _____ soils, based on surveys of soils in a given area.

Soil Surveys

- A soil survey consists of three main parts: _____, _____, and _____.
- The text includes general information about the _____, _____, and _____ of the area.
- The tables describe the _____ and _____ of soils in the area.
- The maps show the approximate locations and types of the different soils.

Uses of Soil Maps

- Soil maps are valuable tools for _____ and land management.
- Soil maps are used by _____, agricultural _____, and _____ agencies.
- The information in soil maps and soil surveys helps developers and agencies identify ways to _____ and use soil and plan sites for future development.

Maps in Action

Topographic Map of the Desolation Watershed

